

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

Claims 7-9, 11 and 13-23 and 25-29 are currently being cancelled.

Claims 1, 3-6, 10, 12 and 24 are currently being amended.

Claims 30 and 31 are currently being added.

This amendment and reply adds, cancels and amends claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After adding, canceling and amending the claims as set forth above, claims 1-6, 10, 12, 24, 30 and 31 are now pending in this application.

Claim Objections:

In the Office Action, claims 7 and 13 were objected to, for the reasons set forth on page 2 of the Office Action. Due to the cancellation of claims 7 and 13, the objection to these claims is now moot.

Claim Rejections – Prior Art:

In the Office Action, claims 1-7, 1, 16-19, 21, 28 and 29 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication No. 2002/0097495 to Mei; claims 8, 9, 11, 12, 23 and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mei in view of U.S. Patent No. 5,691,541 to Ceglio et al.; claims 13-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mei in view of Ceglio et al. and further in view of U.S. Patent Publication No. 2002/0000426 to Mead et al.; claims 20 and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mei in view of U.S. Patent Publication No. 2003/0002040 to MacAulay et al.; claim 25 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mei in view of Ceglio et al. and further in view of U.S.

Patent No. 6,233,035 to Toshiyuki et al.; claim 26 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mei in view of Ceglio et al. and Toshiyuki et al. and further in view of U.S. Patent Publication No. 2003/0027367 to Watkins et al.; and claim 27 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mei in view of Ceglio et al., Toshiyuki et al., and Watkins et al., and further in view of U.S. Patent No. 6,049,555 to Ohsuka et al. These rejections are traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

Presently pending independent claim 1 now recites that some of the spots included in said patterns caused by irradiation at different times overlap with each other at the same position on said substrate so as to realize a level of gradations determined by overlapped times of the spots.

Turning now to the cited art of record, Mei serves to smooth a digital or zigzag mask image illustrated in Figure 1b of that reference into an analog image illustrated in Figure 1a of that reference. To this end, Mei describes partially overlapping a second pixel element onto a first pixel element, whereby Mei does not disclose or suggest overlapping all of the second pixel element onto the first pixel element. In other words, Mei realizes smooth patterning by partially shifting each pixel element partially overlapped. From this, it is readily understood that no disclosure at all is made in Mei with respect to superposing each pixel element a plurality of times so as to realize a level of gradations determined by overlapping times of the spots, as explicitly recited in presently pending independent claim 1.

In start contrast to the operation in Mei, the present invention as exemplified by claim 1 serves to realize a level of gradations determined by overlapped time of spots (see page 8, lines 11-25 of the specification). To this end, the spots are overlapped with one another a plurality of times, as described in the specification.

Accordingly, presently pending independent claim 1, as well as presently pending independent claim 4 that has been amended in a similar manner, patentably distinguish over the disclosure of Mei.

Presently pending independent claim 10 now recites that said means for averaging said output lights and supplying the average light to said mirror device/devices comprises a polarization beam splitter. Support for the “polarization beam splitter” may be found on page 21, lines 21-24 of the specification, whereby such features are not taught or suggested by any of the cited art of record.

Presently pending independent claim 24 now includes the features of claims 25 and 27, as well as other features. In particular, claim 24 now recites that the pinhole plate has a first Peltier element provided on one side of a first surface and a second Peltier element provided on another side of the first surface opposite the one side. Support for these features may be found in Figure 22 of the drawings and in the description of that figure in the specification, whereby such features are not taught or suggested by the cited art of record.

New Claims:

New dependent claims 30 and 31 recite that the spots each have an octagonal or hexagonal shape. Support for these features may be found on page 10, lines 13-21 of the specification, whereby such features provide benefits described in this section of the specification, and whereby such features are not taught or suggested by any of the cited art of record.

Conclusion:

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a

check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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